REMARKS

Claims 1-3 and 5-7 are currently pending in this application. Favorable reconsideration of the application in light of the following comments is respectfully solicited.

In section 5 of the Office Action, claims 1-3 and 5-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,735,230 (Tanabe) in view of U.S. Patent App. Pub. No. 2002/0021275 (Abe). Applicants respectfully traverse.

Claim 1

Independent claim 1 recites, *inter alia*, "[a] two-beam semiconductor laser device . . . wherein a lateral width of the submount along the front part of the submount is 400 μm or more but 700 μm or less." Page 3 of the Office Action asserts these limitations are disclosed by Tanabe, col. 25, lines 34-36, which states the size of sub-mount 31 is "0.7 mm×0.5 mm×0.4 mm in length×width×height." However, as acknowledged by page 3 of the Office Action, "Tanabe et al do not disclose a two-beam semiconductor element having first and second semiconductor laser elements." Instead, Tanabe only describes a single-beam semiconductor laser element. To modify Tanabe in view of Abe, FIG. 7, as proposed by pages 3-4 of the Office Action, two copies of Tanabe's single LD chip 30 would have to be provided to correspond to laser diodes LD1 and LD2 side-by-side as shown in Abe, FIG. 7. This would increase the width of sub-mount 31 at least by the width of 0.25mm for LD chip 30 disclosed at Tanabe, col. 24, lines 32-34. Additionally, sub-mount 31 and wiring films 33 and 34 shown in Tanabe, FIG. 9(b), relied upon by the Office Action with respect to the "first and second electrode pads" recited in claim 1, would have to be modified, and accordingly widened, to accommodate an additional wiring film for the additional electrode introduced by use of an addition laser diode. Accordingly,

Tanabe does not disclose, suggest, or otherwise render obvious the recited "two-beam semiconductor laser device . . . wherein a lateral width of the submount along the front part of the submount is 400 μm or more but 700 μm or less," as recited in claim 1. Abe does not bridge this gap between claim 1 and Tanabe.

For at least the above reasons, the cited art does not render independent claim 1 obvious. Accordingly, Applicants respectfully request withdrawal of the rejection of independent claim 1 and claims 2, 3, and 5-7 which depend thereon.

Claim 5

Claim 5 recites, *inter alia*,

> a metal frame;
> wherein the submount is mounted directly on the frame, and
> no photodetector is directly mounted on the frame.

Section 9 of the Office Action asserts heat sink section 40 shown in Tanabe, FIG. 9(a) discloses the recited "metal frame." However, this assertion arbitrarily relies upon only a section of the entire metal mount upon which Tanabe's sub-mount 31 is mounted, as the entire metal mount disclosed by Tanabe comprises not only heat sink section 40, but also stem 43. A reference is to be relied upon for what it discloses – not only expressly, but also for the inherent teachings of the reference. Tanabe, col. 25, lines 13-17 states:

> The heat sink section 40 is . . . fixed to a stem 43, and electrically connected to the first lead 44 fixed to the stem 43.

Also, Tanabe, col. 25, lines 50-56 states:

> the first wiring film 33 is connected to the upper face 42 of the heat sink 40 . . . by wire bonding through gold wires 38, etc. Thus, the n-side electrode of the LD chip 30 is electrically connected to the first lead 44 of the stem 43 through the upper face 42 of the heat sink section 40.

Although Tanabe does not expressly state stem 43 is metal, given that the n-side electrode of the LD chip 30 is electrically connected to the first lead 44 via heat sink 40 and stem 43, coupled with the need for heat sink section 40 to dispel heat it obtains from LD chip 30, Tanabe inherently discloses stem 43 is part of the metal mount for LD chip 30.

Accordingly, Tanabe discloses use of a photodetector on its metal mount comprised of heat sink section 40 and stem 43. As shown in Tanabe, FIG. 9(a), and discussed at col. 26, lines 1-2, "monitor-use light-receiving element 47 [is] bonded onto the stem 43." Thus, Tanabe fails to disclose, suggest, or otherwise render obvious that "no photodetector is directly mounted on the frame," as recited in claim 5, as monitor-use light-receiving element 47 provides a photodetector "for monitoring the variation in the output of the LD chip 30" (col. 26, lines 3-4). Thus, the asserted basis of obviousness of claim 5 in view of Tanabe is incorrect, and the Office has not demonstrated *prima facie* obviousness. Thus, in addition to the reasons discussed with respect to independent claim 1, claim 5 recites further limitations which are nonobvious in view of the cited art. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 5 and claims 6 and 7 which depend thereon.

Claim 6

Claim 6 recites, *inter alia*, "the two-beam semiconductor laser device is built as a three-terminal two-beam semiconductor laser device having only three terminals." Section 10 of the Office Action asserts

> . . . Tanabe et al disclose wherein the semiconductor laser device is built as a three-terminal semiconductor laser device having only three terminals (44-46, col. 25 lines 65-67).

The Office Action relies upon "the semiconductor device" as disclosed in Tanabe, FIG. 9(a), to which the cited portions of Tanabe relate. However, as discussed above, Tanabe, FIG. 9

relates to a single-beam semiconductor laser device – not the recited two-beam semiconductor laser device." Although Tanabe, FIG. 9(a) shows a device with three leads 44, 45, and 46, were Tanabe modified to correspond to Abe, FIG. 7, as proposed by pages 3-4 of the Office Action, an additional lead would be required, corresponding to the additional laser diode –as shown in Abe, FIG. 8A (which has 4 terminals 22 for a two-beam semiconductor device). Thus, the cited art does not render obvious the "two-beam semiconductor laser device . . . having only three terminals" recited in claim 6. Thus, in addition to the reasons presented with respect to independent claim 1, further limitations recited in claim 6 are not obvious in view of the cited art. Thus, Applicants respectfully request withdrawal of the rejection of claim 6.

In view of the foregoing remarks, Applicants respectfully submit that the instant application is in condition for allowance, and respectfully request the Examiner's favorable reconsideration as to allowance, and withdrawal of any rejections of the pending claims. If the Examiner believes a telephone conference would expedite prosecution of this application, please contact the Applicants' representative listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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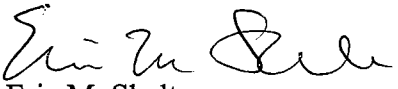

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